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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/561,809	05/05/2006	Francesco Cellini	283633US0XPCT	9767
22850 7590 09/01/2009 OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER WESSENDORF, TERESA D	
			ART UNIT 1639	PAPER NUMBER
			NOTIFICATION DATE 09/01/2009	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/561,809	<b>Applicant(s)</b> CELLINI ET AL.	
	<b>Examiner</b> TERESA WESSENDORF	<b>Art Unit</b> 1639	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04 May 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) 6-8 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 9-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

***Election/Restrictions***

Newly submitted claims 7 and 8 directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: these claims are drawn to species of the seed *Lycopersicon esculenium* and *Triticum durum* seeds. These are two distinct and independent species. The claim as prosecuted does not claim species, especially two distinct species as in the presently claims 7 and 8.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 7 and 8 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

***Status of Claims***

Claims 1-11 are pending and under examination.

Claims 6-8 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention and species.

Claims 1-5 and 9-11 are under examination.

***Withdrawn Rejection***

In view of the amendments to the specification and claims the objection to the specification (abstract) and 35 USC 112, second paragraph rejections are withdrawn.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

***Claim Rejections - 35 USC § 102***

Claims 1-5 and 9-11, as amended and added are rejected under 35 U.S.C. 102(b) as being anticipated by Sano et al (Mol.Gen. Genet) for reasons of record as reiterated below.

Sano discloses throughout the article at e.g., page 228 under Materials and methods section up to page 230 a method for isolating of expressed sequence tags in different development phases of plants comprising (a) germinating seeds in a suitable medium in the presence of 5-azaCytidine in quantities ranging from 0.1 mM to 2 mM, thereby forming shoots [see e.g., page 228, col. 1, first paragraph which states a Japanese rice treated with 0.3mM azaC]; (b) extracting nucleic acids from the shoots grown as specified in (a)[ total RNA was isolated from aza-C treated seedlings(synonymous to shoots), Sano, ibid]; (c) synthesizing a cDNA library comprising clones starting from the nucleic acids extracted in step (b) [complementary DNA was

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synthesized, cloned into lambda gt10, Sano, ibid]; (d) sequencing and sequence analyzing clones of the library [Sano under RESULTS section states subsequent screening of cDNA libraries, derived from azaC-treated seedlings, led to identification of several differentially expressed candidate clones, and was the subject of further analysis. (Fig. 1, shows the nucleotide sequence isolated and identified from the aza-C treated seedlings)].

### ***Response to Arguments***

Applicants argue that Sano teaches treating seedlings, i.e., seeds after they have been germinated from seeds, and cannot be the same as that which is claimed. As explained on page 1 of the application, by treating the seeds with 5-azaC in the germination phase, demethylation can be induced. In this way, it is possible to obtain "totipotent" seedlings capable of expressing as many genes as possible regardless of the development phase of the plant (Cf. Claim 1: in different development phases of plants). In contrast, Sano describes the isolation of a novel GTP-binding protein (and related encoding rgpl gene) whose expression is reduced in rice seedlings treated with 5-azaC. On page 231, first paragraph, right column, Sano stated that the reduced expression of rgpl gene in plants

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treated with 5-azaC in unexpected, due to the fact that it is an inhibitor of DNA methylation.

In reply, Sano's teachings of a seedling treated with 5-azaC would have inherently taught that the seedlings' originated from its seeds. Cf. with Example 2, page 15 of the instant specification which recites seedlings (not seeds) treated with 5-azaC:

The messenger RNA was extracted from etiolated seedlings of hard corn....germinated on... medium containing 5-AzaCytidine 0.3 mM, using the Invitrogen kit...

Accordingly, the instant claim which germinates seed produces seedlings that reacted with the 5-azaC in the same way as Sano did. That the seedlings of Sano originates from its seed would be inherent to the prior art teachings.

Applicants arguments with respect to the demethylation being induced by treatment with 5-azaC is not commensurate in scope with the claims which does not recite said demethylation. Be that as it may, attention is drawn to the Summary section of Sano, page 227, col. 1 which states:

Exposure of normal, tall rice... seedlings to 5-azacytidine, a powerful inhibitor of DNA methylation in vivo, induced both demethylation of genomic DNA and dwarf plants. Genes that had been affected by treatment were identified by differential screening of a cDNA library.....and a... gene, was subsequently isolated...

As for applicants' arguments of "totipotent" seedlings capable of expressing as many genes as possible regardless of the development phase of the plant, attention is drawn to paragraph bridging pages 229 and 230 of Sano.

Sano teaches:

...This time-dependent character of rgp1 expression indicates that its product may play a particular role at a distinct stage of seedling growth.

No claim is allowed.

#### **Conclusion**

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

**This application contains claim 6 drawn to an invention nonelected with traverse. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.**

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to TERESA WESSENDORF whose telephone number is (571)272-0812. The examiner can normally be reached on flexitime.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Low can be reached on 571-272-0951951. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/TERESA WESSENDORF/  
Primary Examiner, Art Unit 1639